



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

INVENTOR(S)

: Edward A. Enyedy

: **DRIVE ROLLERS FOR WIRE FEEDING
MECHANISM**

APPLICATION NO.

: 10/800,929

FILED

: March 15, 2004

CONFIRMATION NO.

: 9567

EXAMINER

: Evan H. Langdon

ART UNIT

: 3654

LAST OFFICE ACTION

: July 22, 2005

ATTORNEY DOCKET NO.

: LEEE 2 00381

**TRANSMITTAL OF
APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants transmit herewith one (1) copy of APPEAL BRIEF UNDER 37 C.F.R. § 41.37 for the above-referenced patent application.

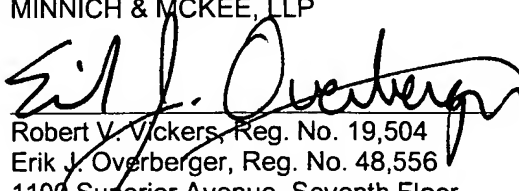
Payment for the filing of this Appeal Brief (\$500.00) is authorized to be charged to a Credit Card. The appropriate form PTO-2038 is enclosed for this purpose. **If the Credit Card is unable to be charged, please charge any and all fees or credit any overpayment to Deposit Account No. 06-0308.**

Respectfully submitted,

FAY, SHARPE, FAGAN,
MINNICH & MCKEE, LLP

Date:

Oct. 17, 2005


Robert V. Vickers, Reg. No. 19,504
Erik J. Overberger, Reg. No. 48,556
1100 Superior Avenue, Seventh Floor
Cleveland, Ohio 44114-2518
216.861.5582

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this Appeal Brief Transmittal Letter and Appeal Brief Under 37 C.F.R. § 1.192 are being sent by the United States Postal Service as Express Mail procedure and is addressed to Mail Stop - Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Express Mail No. EV702963023US

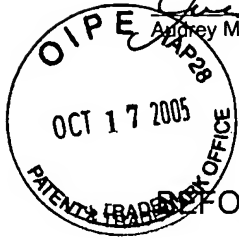

Audrey M. Dragon

Date: 10/17/05

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this Appeal Brief Under 37 C.F.R. §1.192 is being sent by the United States Postal Service as Express Mail procedure and is addressed to Mail Stop – Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Express Mail No. EV702963023US

Date: 10/17/05



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

IN RE APPLICATION OF : Edward A. Enyedy
 FOR : **DRIVE ROLLERS FOR WIRE
 FEEDING MECHANISM**
 SERIAL NO. : 10/800,929
 FILED : March 15, 2004
 EXAMINER : Evan H. Langdon
 ART UNIT : 3654
 CONFIRMATION NO. : 9567
 LAST OFFICE ACTION : July 22, 2005
 ATTORNEY DOCKET NO. : LEE 2 00381

APPEAL BRIEF UNDER 37 C.F.R. §41.37

Mail Stop Appeal Brief-Patents
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Sir:

This Appeal Brief is in furtherance of the Notice of Appeal that was filed on August 17, 2005 and received by the U.S. Patent and Trademark Office on August 19, 2005.

The fees required under 37 C.F.R. §41.20 and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying Transmittal of Appeal Brief.

Appellant files herewith an Appeal Brief in connection with the above-identified application wherein claims 1-20 were finally rejected in the final Office Action of May 17, 2005. What follows is Appellant's Appeal Brief in accordance with 37 C.F.R. §41.37.

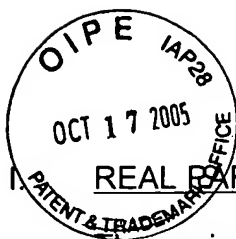


TABLE OF CONTENTS

	<u>Page</u>
I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i)).....	1
II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))...	1
III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))	1
IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(C)(1)(iv))	1
V. SUMMARY OF THE INVENTION (37 C.F.R. § 41.37(c)(1)(v)).....	2
VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))	3
VII. ARGUMENTS (37 C.F.R. § 41.37(c)(1)(vii))	4
A. Independent Claim 1 And Dependent Claims 2-3 and 5 Are In Condition For Allowance	4
1. The Examiner's Rejection Of Claim 1 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed	4
a. Intersecting Walls Defining A Groove Recited In Claim 1 And Not Shown By The References Of Record	5
(i) Feature Of Intersecting Walls Defining A Groove Recited In Claim 1	5
(ii) Intersecting Walls Defining A Groove Not Shown In References Of Record	6
b. Combination Of Gilliland And Applicant's Figure 5 Improper	7
(i) No Motivation To Combine Applicant's Disclosure With The Teachings of Gilliland.....	7
(ii) Teachings Of Gilliland And Applicant's Figure 5 Are Incongruous And Teach Away From One Another	9
c. Dependent Claims 2-3 And 5 Should Be Allowed When Claim 1 Is Allowed.....	10
B. Dependent Claim 4 Is In Condition For Allowance.....	10

1.	Dependent Claim 4 Should Be Allowed Due To Its Dependency From Claim 1	10
2.	The Examiner's Rejection Of Dependent Claim 4 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed.....	10
C.	Independent Claim 6 And Dependent Claims 7 And 10-13 Are In Condition For Allowance	11
1.	The Examiner's Rejection Of Claim 6 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed.....	11
a.	Gilliland And Applicant's Disclosure Together Fail To Disclose Or Fairly Suggest Claim 6.....	11
b.	Combination Of Gilliland And Applicant's Figure 5 Is Improper	12
2.	Dependent Claims 7 And 10-13 Should Be Allowed When Claim 6 Is Allowed.....	13
D.	Dependent Claims 8 And 9 Are In Condition For Allowance.....	13
1.	Dependent Claim 8 Should Be Allowed Due To Its Dependency From Claim 6.....	13
2.	The Examiner's Rejection Of Dependent Claim 8 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed.....	13
E.	Independent Claim 14 And Dependent Claims 15-17 Are In Condition For Allowance	14
1.	The Examiner's Rejection Of Claim 14 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed.....	14
a.	The Combination Advanced By The Examiner Fails To Show Or Fairly Suggest Each And Every Limitation Of Claim 14	14
b.	Combination of Gilliland And Applicant's Disclosure Improper	15
2.	Dependent Claims 15-17 Should Be Allowed When Claim 14 Is Allowed.....	15
F.	Dependent Claims 18-20 Are In Condition For Allowance.....	15

1. Dependent Claims 18-20 Should Be Allowed Due To Their Dependency From Claim 14.....	15
2. The Examiner's Rejection Of Dependent Claim 18 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed.....	16
3. Dependent Claims 19-20 Should Be Allowed When Claim 18 Is Allowed.....	16
VIII. CONCLUSION.....	17
CLAIMS APPENDIX 37 C.F.R. § 41.37(c)(1)(viii).....	1



REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The assignee of this application, Lincoln Global, Inc., is the real party in interest. The assignment by the inventors to Lincoln Global, Inc. is recorded in the U.S. Patent Office at Reel 015100, Frame 0667.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

There are no related appeals or interfaces.

III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

All pending claims, i.e., claims 1-20, have been finally rejected in the Office Action dated May 17, 2005. In particular, claims 1-10 and 14-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gilliland (U.S. Patent No. 5,540,371) in view of "Applicant's disclosure page 1 line 15 to page 3 line 29 and Figure 5." See *page 2 of final Office Action*. Claims 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gilliland in view of "Applicant's disclosure page 1 line 15 to page 3 line 29 and Figure 5" (hereinafter "Applicant's Disclosure"), and in further view of Blank et al. (U.S. Patent No. 6,427,894). See *page 4 of final Office Action*.

Appellant appeals the rejection of all the pending claims, including claims 1-20. A correct copy of the claims 1-20 appears in the Appendix attached hereto.

IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(C)(1)(iv))

No amendments were made after the May 17, 2005 mail date of the Office Action finally rejecting all claims. Accordingly, the claims examined in the final Office Action are the same as those presented in the attached Appendix. There were no claim amendments submitted with the Notice of Appeal.

V. SUMMARY OF THE INVENTION (37 C.F.R. § 41.37(c)(1)(v))

A concise explanation of the subject matter defined in each of the independent claims involved in the appeal (i.e., claims 1, 6 and 14) is provided in the paragraphs that follow.

With reference to Figures 1-3, in accordance with one aspect (claim 1), a wire feeding mechanism (10) for advancing a continuous length of wire (18) along a pathway (12) includes a housing (30) having two roller supports (44,46) each rotatable about a corresponding axis transverse to a wire pathway (12). *See page 6, lines 6-14 and page 7, lines 18-26.* The roller supports (44,46) are on opposite sides of the pathway (12) and are driveably engaged with each other. *See page 7, lines 26-28.* The wire feeding mechanism (10) further includes a drive roller (36,38) on each of said roller supports (44,46) for rotation therewith. *See page 6, lines 29-31 and page 7, line 1+.* The drive roller (36,38) includes an outer surface (54) extending circumferentially about the corresponding axis that defines a groove (58) having an included angle between a pair of intersecting walls (60,62) defining the groove (58) that is about thirty degrees (30°) or greater and less than ninety degrees (90°). *See page 8, lines 9-24.* The drive roller (36,38) on each of the roller supports (44,46) compressively contacts a continuous length of wire (18) between the roller supports (44,46) such that the wire (18) is advanced along the pathway (12) in response to rotation of the drive rollers (36,38). *See page 7, lines 5-8 and 29-31 and page 8, lines 1+.*

With continued reference to Figures 1-3, in accordance with another aspect (claim 6), a wire feeding mechanism (10) for advancing a continuous length of wire (18) along a pathway (12) includes a housing (30) having two roller supports (44,46) each rotatable about a corresponding axis transverse to a wire pathway (12). *See page 6, lines 6-14 and 26-27 and page 7, lines 18-26.* The roller supports (44,46) are on opposite sides of the pathway (12) and are driveably engaged with each other. *See page 7, lines 26-28.* A first drive roller (36) is concentrically disposed with one of the two roller supports (44,46) for rotation therewith. *See page 6, lines 29-31 and page 7, line 1+.* The first drive roller (36) includes a first drive roller groove (58) extending circumferentially therearound and having a first drive roller included angle of at least about thirty degrees (30°) and less than ninety degrees (90°). *See page 8, lines 9-24.* A second drive roller (38) is concentrically disposed with the other of said two roller

supports (44,46) for rotation therewith. *See page 6, lines 29-31 and page 7 lines 1+.* The second drive roller (38) includes a second drive roller groove (58) extending circumferentially therearound and having a second drive roller included angle of at least about thirty degrees (30°) and less than ninety degrees (90°). *See page 8, lines 9-24.* The first and second drive rollers (36,38) are positioned relative to one another such that a continuous length of wire (18) received in the circumferential grooves (58) between the first and second drive rollers (36,38) is advanced along the pathway (12) in response to rotation of the first and second drive rollers (36,38). *See page 7, lines 5-8 and lines 29-31 and page 8, lines 1+.*

Again with reference to Figures 1-3, in accordance with yet another aspect (claim 14), a wire feeding mechanism (10) for advancing a continuous length of wire (18) along a pathway (12) includes a first drive roller (36) rotatably supported in a housing (30) for engaging and advancing a continuous length of wire (18) along a pathway (12). *See page 6, lines 6-14 and 29-31 and page 7, lines 1+ and 18-26.* A second drive roller (38) is rotatably supported in the housing (30) on an opposite side of the pathway (12) from the first drive roller (36) for engaging and advancing the wire (18) along the pathway (12). *Id.* The first and second drive rollers (36,38) each include an outer surface (54) extending circumferentially thereabout. *See page 8, lines 9-24.* The outer surface (54) has a first side wall (60) and a second side wall (62) extending radially thereinto that together define a groove (58). *Id.* The first side wall (60) intersects the second wall (62) and is oriented at an angle of less than ninety degrees (90°) relative to said second side wall (62). *Id.*

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

A concise statement of each ground of rejection presented for review is as follows.

(1) Whether claim 1 is unpatentable under 35 U.S.C. § 103(a) over Gilliland in view of Applicant's Disclosure.

(2) Whether claim 4 is unpatentable under 35 U.S.C. § 103(a) over Gilliland in view of Applicant's Disclosure.

(3) Whether claim 6 is unpatentable under 35 U.S.C. § 103(a) over Gilliland in view of Applicant's Disclosure.

(4) Whether claim 8 is unpatentable under 35 U.S.C. § 103(a) Gilliland in view of Applicant's Disclosure.

(5) Whether claim 14 is unpatentable under 35 U.S.C. § 103(a) Gilliland in view of Applicant's Disclosure.

(6) Whether claim 18 is unpatentable under 35 U.S.C. § 103(a) Gilliland in view of Applicant's Disclosure.

VII. ARGUMENTS (37 C.F.R. § 41.37(c)(1)(vii))

A. Independent Claim 1 And Dependent Claims 2-3 and 5 Are In Condition For Allowance

1. The Examiner's Rejection Of Claim 1 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed

Claim 1 calls for a drive roller on each of two roller supports to include an outer surface "that defines a groove having an included angle between a pair of intersecting walls defining the groove that is about thirty degrees (30°) or greater and less than ninety degrees (90°)." As indicated in the preceding section, the Examiner rejected claim 1 over the combination of Gilliland and Applicant's Disclosure. Specifically, the Examiner asserts that "[i]t would have been obvious to one of ordinary skill in the art ... to modify the feeding mechanism of Gilliland to include a housing and roller supports as suggested by the applicant's disclosure ... to provide support and to modify the included angle of the circumferential groove of Gilliland to include an included angle of at least [sic] 30 degrees and less than 90 degrees (30-60 degrees) as suggested by the disclosed prior art of Figure 5" *Office Action* at pg. 3. The Examiner further asserts that Gilliland as modified by Applicant's Disclosure teaches the feature of a pair of intersecting walls defining a groove. *Id.* at pg. 5.

Applicant/Appellant respectfully disagrees. First, Applicant/Appellant asserts that the limitation of claim 1 calling for a drive roller on each of two roller supports to include an outer surface that defines a groove having an included angle between a pair of intersecting walls defining the groove that is about thirty degrees (30°) or greater and less than ninety degrees (90°) is positively recited in claim 1 and not shown, or fairly

suggested, by the references of record. Second, Applicant asserts that the combination of Gilliland and Applicant's Disclosure is improper, as there is not proper motivation to modify Gilliland with Applicant's Disclosure.

a. Intersecting Walls Defining A Groove Recited In Claim 1 And Not Shown By The References Of Record

To deal with the limitation of claim 1 calling for intersecting walls defining a groove, the Examiner asserts that the limitation is not recited in the rejected claims (i.e., claim 1) and asserts that, even if "it" (intersecting walls defining a groove) was recited, the limitation/feature is taught by Figure 5 of Applicant's Disclosure. See *final Office Action at page 5*.

(i) Feature Of Intersecting Walls Defining A Groove Recited In Claim 1

The Examiner asserts that the "feature" (a pair of intersecting walls defining the groove) previously relied upon by Applicant in arguing the patentability of claim 1 is not recited in rejected claim 1. The Examiner is mistaken. Claim 1 recites, in full:

1. A wire feeding mechanism for advancing a continuous length of wire along a pathway, comprising:

a housing having two roller supports each rotatable about a corresponding axis transverse to a wire pathway, said roller supports being on opposite sides of said pathway and being driveably engaged with each other;

a drive roller on each of said roller supports for rotation therewith, said drive roller including an outer surface extending circumferentially about said corresponding axis that defines **a groove having an included angle between a pair of intersecting walls defining the groove that is about thirty degrees (30°) or greater and less than ninety degrees (90°)**, said drive roller on each of said roller supports compressively contacting a continuous length of wire between said roller supports such

that said wire is advanced along said pathway in response to rotation of said drive rollers.

(*emphasis added*). Thus, Applicant/Appellant respectfully asserts that claim 1 clearly calls for a groove having an included angle between a pair of intersecting walls and explicitly calls for the pair of intersecting walls to define the groove. It is disingenuous for the Examiner to maintain the position that claim 1 fails to recite a pair of intersecting walls defining the groove.

(ii) Intersecting Walls Defining A Groove Not Shown In References Of Record

Applicant/Appellant respectfully asserts that Gilliland, with reference to Figure 3B thereof, merely discloses a groove 35 defined in a drive roller 32 that is a flat-bottomed V-shaped groove with an inward taper of four degrees (4°) on each wall. *Gilliland at col. 6, lines 51-53*. Gilliland fails to disclose (i) a pair of intersecting walls defining a groove and (ii) a pair of intersecting walls defining a groove that is between about thirty degrees (30°) or greater and less than ninety degrees (90°). The inwardly tapering walls (no reference numeral) do not intersect one another to form groove 35. Without intersecting one another, the inwardly tapering walls cannot be said to define a groove that is between about thirty degrees (30°) or greater and less than ninety degrees (90°).

Adding Figure 5 of Applicant's Disclosure to Gilliland fails to correct this deficiency. Figure 5 shows a drive roller arrangement wherein a first roller 122 includes a sharp-angled groove 120, which can be at an angle of between thirty and sixty degrees, and a second roller 124 having no groove. Thus, if the teachings of Figure 5 were added to Gilliland, Gilliland groove 34 would be modified to resemble Applicant's Figure 5 groove 120 and Gilliland groove 35 would be removed entirely (so that Gilliland drive roller 32A would resemble Applicant's Figure 5 driver roller 124). In contrast, claim 1 requires a drive roller on each of two roller supports (i.e., two drive rollers) to include an outer surface defining a groove. Thus, in the invention of claim 1, a groove defined by intersecting walls is provided on a drive roller and another groove defined by intersecting walls is provided on another, opposed drive roller.

Assuming arguendo that the Examiner is contending that both grooves 34,35 of Gilliland should be modified to be like Applicant's Figure 5 groove 120, this would still fail.¹ Modifying both grooves 34,35 of Gilliland to be like groove 120 would create a set of drive rollers that would fail to advance a continuous length of wire. Applicant's Disclosure specifically shows the wire 132 in Figure 5 having a centerline sitting below flat surface 134 (the surface in which groove 120 is formed) of drive roller 122. See *Application at pg. 3, lines 19-22 and Figure 5*. If both of Gilliland's drive rollers 32A,32B were modified to have grooves like groove 120, the sidewalls 126,128 of both of the modified grooves would fail to contact the wire and thus could not advance a continuous length of wire. Claim 1 recites that the drive roller on each of the roller supports (i.e., two drive rollers) compressively contacts the wire such that the same is advanced in response to rotation of the drive rollers, so even modifying Gilliland to include rollers each having grooves as shown in Figure 5 would still fail to teach or suggest the invention of claim 1.

For at least this/these reasons, Applicant/Appellant submits that the Examiner's rejection of claim 4 must be reversed.

b. Combination Of Gilliland And Applicant's Figure 5 Improper

Applicant/Appellant contends that one skilled in the art would not be motivated to combine the teachings of Gilliland with that of Applicant's Disclosure, particularly in the selective manner put forth by the Examiner. In fact, the teachings of Applicant's Disclosure and Gilliland are incongruous and teach away from one another.

(i) No Motivation To Combine Applicant's Disclosure With The Teachings of Gilliland

The Examiner has provided no reference, or other evidence, to support his conclusion that it would be obvious to one skilled in the art to modify Gilliland with Applicant's Disclosure, particularly in the selective manner advanced by the Examiner

¹ Applicant strenuously argues that such a selective combination of elements is unfair and well beyond what would be obvious to one skilled in the art. There is no motivation for the skilled person to take one drive roller 122 from an arrangement of two complementary drive rollers 122,124 and use the groove 120 of that one drive roller 122 to modify both of a pair of drive rollers 32A,32B in another drive roller arrangement 32.

(i.e., taking one of two drive rollers from the Figure 5, one groove/two drive roller arrangement and using the one groove as both grooves in a two groove, two drive roller arrangement). Applicant/Appellant asserts that the Examiner has impermissibly concluded that claim 1 is obvious without any legitimate support on the record.

A *prima facie* case of obviousness is not established absent proper motivation. Simply because the drive rollers of Gilliland could be modified to include a pair of grooves, such as the single groove shown in Figure 5, motivation to modify Gilliland to meet the limitations of claim 1 is not found. Moreover, according to MPEP § 2144.01, the "fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness." Merely because the claimed elements are individually found in the prior art, it does not necessarily follow that it would be obvious to combine the elements from different prior art references. See MPEP § 2141.01 citing *Ex parte Levengood*, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993). Consequently, absent a motivation to combine and modify Gilliland with Applicant's Disclosure, it is irrelevant that the elements and/or limitations may be individually or separately known in the prior art.

In the Advisory Action of July 22, 2005, the Examiner asserts that there is no requirement that a motivation to make a modification be expressly articulated. Even if this were the case, the Examiner is not given a free pass to modify and/or combine references however he or she wishes. The Examiner is still required to proffer some evidence as to why one skilled in the art would be motivated to modify and combine references. The motivations provided by the Examiner in the Advisory Action are merely those described in Applicant's/Appellant's application as to why the invention of claim 1 is desirable. These are not sufficient or proper reasons to show why one skilled in the art would have been motivated to modify Gilliland at the time of the invention with the prior art teachings of Applicant's Disclosure. Applicant/Appellant submits that the Examiner has failed to properly show why one skilled in the art would be motivated to modify Gilliland, other than merely to meet the limitations of claim 1.

(ii) Teachings Of Gilliland And Applicant's Figure 5 Are Incongruous And Teach Away From One Another

Gilliland Figure 3B discloses a two groove, two drive roller arrangement 32 wherein a first drive roller 32A includes a first groove 35 and a second drive roller 32B, in opposed relation to the first drive roller 32A, includes a second groove 34. The grooves 34 and 35 appear to be identical. A wire is received in the grooves 34,35 to be advanced by the rollers 32A,32B as they are rotated. Applicant's Figure 5, a key portion of Applicant's Disclosure relied upon by the Examiner, discloses a one groove, two drive roller arrangement wherein a first drive roller 122 includes a groove 120 and a second drive roller 124 is flat (i.e., no groove). The flat drive roller 124 forces a wire 132 into the groove 120 such that its centerline is below an outer surface 132 of the drive roller 122. Rotation of the drive rollers 122,124 advances the wire 132 along a path.

Modifying the Gilliland arrangement such that its rollers 32A,32B each have a groove like groove 120 from Applicant's Figure 5 would create an inoperable arrangement. The wire received between such modified drive rollers would no longer be contacted in such a way as to enable the drive rollers to advance the wire. More specifically, the depth of the groove of Applicant's Figure 5 is such that a centerline of the wire 132 is received below drive roller outer surface 134. Flat driver roller 124 maintains the wire 132 in the groove 120 and in contact with the walls 126,128 defining the groove 120. Two opposed drive rollers, each with grooves like groove 120, would create too large an area for the wire and neither drive roller would force the wire into the walls forming the groove of the other drive roller. Accordingly, Applicant submits that the one groove and flat drive roller arrangement of Applicant's Figure 5 teaches away from the two groove arrangement of Gilliland.

~ For all the reasons discussed above, Applicant/Appellant respectfully submits that the Examiner's rejections of claim 1 must be reversed.

c. Dependent Claims 2-3 And 5 Should Be Allowed When Claim 1 Is Allowed

Provided the Examiner's rejection of Claim 1 is overturned, Applicant/Appellant submits that claims 2-3 and 5 are in condition for allowance simply because these claims depend from claim 1.

B. Dependent Claim 4 Is In Condition For Allowance

1. Dependent Claim 4 Should Be Allowed Due To Its Dependency From Claim 1

Provided the Examiner's rejection of claim 1 is overturned, Applicant/Appellant submits that claim 4 is in condition for allowance simply because this claim depends from claim 1.

2. The Examiner's Rejection Of Dependent Claim 4 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed

Claim 4, dependent from independent claim 1, calls for a centerline of a continuous length of wire to be above outer surfaces of opposed drive rollers used to advance the wire. The Examiner asserts that "Gilliland discloses where the centerline of the wire 11 is above the outer surface of the drive roller 32A, 32B." *Office Action* at pg. 3 and pg. 4. The problem with the Examiner's position is that he fails to account for the modification he used to reject independent claim 1. When the Examiner uses Figure 5 from Applicant's Disclosure to reject claim 1, the rollers 32A,32B of Gilliland include grooves 120 (according to the Examiner's combination). If rollers 32A,32B include grooves 120, then a wire supported therebetween cannot have its centerline above outside surfaces of both drive rollers and be driven by the drive rollers. For at least this reason, Applicant/Appellant submits that the Examiner's rejection of claim 4 must be reversed.

C. Independent Claim 6 And Dependent Claims 7 And 10-13 Are In Condition For Allowance

1. The Examiner's Rejection Of Claim 6 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed

Claim 6 calls for a first drive roller to include a first drive roller groove extending circumferentially therearound and having a first drive roller included angle of at least about thirty degrees (30°) and less than ninety degrees (90°). Claim 6 further calls for a second drive roller to include a second drive roller groove extending circumferentially therearound and a having a second drive roller included angle of at least about thirty degrees (30°) and less than ninety degrees (90°). Applicant/Appellant respectfully asserts that the rejection of claim 6 must be reversed because the applied combination fails to disclose all the limitations of claim 6 and/or the combination is improper.

a. Gilliland And Applicant's Disclosure Together Fail To Disclose Or Fairly Suggest Claim 6

Applicant/Appellant respectfully submits that claim 6 is patentably distinct over Gilliland, alone or in combination with Applicant's Disclosure, fail to disclose or fairly suggest the wire feeding mechanism of claim 6. More particularly, as already discussed herein, Gilliland discloses a drive roll arrangement 32 wherein two opposed drive rollers 32A,32B have opposed grooves 35,34 which are flat bottomed V-shaped grooves. The side walls of these flat bottomed V-shaped grooves 35,34 are said to include a four (4) degree taper. Thus, there is no disclosure of included angle in the drive rollers being at least about thirty degrees (30°) and less than ninety degrees (90°), as required by claim 6.

Modifying Gilliland with Figure 5 of Applicant's Disclosure still fails to provide the wire feeding mechanism of claim 6, which includes drive rollers having included angles that are at least about thirty degrees (30°) and less than ninety degrees (90°). As already discussed, Figure 5 shows a drive roller arrangement wherein a first drive roller 122 includes a groove 120 into which a wire 132 is forced by a second, flat drive roller 124 (i.e., a drive roller without a groove) such that a centerline of the wire 132 is below an outer surface 132 of the first drive roller 122. If the Examiner is asserting that the Figure 5 drive roller arrangement be imported to Gilliland, then only one drive roller

would include a groove. In contrast, claim 6 calls for first and second drive rollers to include, respectively, first and second grooves.

If the Examiner is asserting that only the groove 120 of Applicant's Figure 5 be imported to both of the drive rollers 32A,32B of Gilliland, then the driver rollers 32A,32B would fail to be able to advance a continuous length of wire received in the modified roller's grooves, which is required by claim 6 (claim 6: "said first and second drive rollers positioned relative to one another such that a continuous length of wire received in said circumferential grooves between said first and second drive rollers is advanced along said passageway in response to rotation of said first and second drive rollers"). More specifically, the groove 120 of Applicant's Figure 5 is such that a wire, such as wire 132, received therein has its centerline received below an outer surface, such as surface 134, of the grooved drive roller. In the illustrated arrangement, a flat drive roller 134 is used to force the wire into the walls forming the groove so that the wire can be advanced upon rotation of the drive rollers. Two opposed drive rollers, such as 32A and 32B of Gilliland, each having grooves like groove 120 of Applicant's Figure 5 would fail to force a wire received therebetween into the opposed drive roller such that rotation of the drive rollers would fail to advance the wire.

b. Combination Of Gilliland And Applicant's Figure 5 Is Improper

Additionally, for the reasons already discussed at length herein, Applicant respectfully asserts that modifying Gilliland with the alleged prior teachings of Applicant's Disclosure (i.e., Figure 5) is improper. First, motivation to combine these teachings is lacking and, second, the primary reference (Gilliland) and Figure 5 of Applicant's Disclosure teach away from one another (i.e., teach away from being combined).

Moreover, no separate statement of purported motivation to combine was provided by the Examiner in addition to that provided in reference to claim 1. In claim 1, the Examiner appears to assert that one skilled in the art would be motivated to modify Gilliland with the teachings of Applicant's Figure 5 "to decrease the compressive forces of the wire, and to provide more contact with the wire to reduce slippage while reducing the amount of pressure to grip the wire." *Office Action* at pg. 3. Since no separate statement is provided with claim 6, Applicant presumes the Examiner is

relying on this same statement as allegedly showing why one skilled in the art would modify Gilliland with the teachings of Applicant's Figure 5.

The Examiner's statement is not supported by the teachings of Gilliland and Applicant's Figure 5. As already discussed herein, adding grooves 120 (from Figure 5) to the drive rollers 32A,32B (from Gilliland) would not serve to decrease the compressive forces need to advance the wire, nor would such an arrangement serve to provide more contact with the wire to reduce slippage while reducing the amount of pressure needed to grip the wire. Rather, the wire would no longer be appropriately gripped by the drive rollers. Too much space would be provided between opposed grooves 120 and thus the wire would not be advanced by opposed drive rollers including grooves 120. Thus, the Examiner's provision of a purported motivation to combine is specious and fails upon closer inspection.

For all the reasons discussed above, Applicant/Appellant respectfully submits that the Examiner's rejection of claim 6 must be reversed.

2. Dependent Claims 7 And 10-13 Should Be Allowed When Claim 6 Is Allowed

Provided the Examiner's rejection of claim 6 is overturned, Applicant/Appellant submits that claims 7 and 9-13 are in condition for allowance simply because these claims depend from claim 6.

D. Dependent Claims 8 And 9 Are In Condition For Allowance

1. Dependent Claim 8 Should Be Allowed Due To Its Dependency From Claim 6

Provided the Examiner's rejection of claim 6 is overturned, Applicant/Appellant submits that claim 8 is in condition for allowance simply because this claim depends from claim 1.

2. The Examiner's Rejection Of Dependent Claim 8 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed

Claim 8, dependent from independent claim 6, calls for a centerline of a continuous length of wire to be above outer surfaces of opposed drive rollers used to

advance the wire. The Examiner asserts that "Gilliland discloses where the centerline of the wire 11 is above the outer surface of the drive roller 32A, 32B." *Office Action* at pg. 3 and pg. 4. The problem with the Examiner's position is that he fails to account for the modification he used to reject independent claim 6. When the Examiner uses Figure 5 from Applicant's Disclosure to reject claim 6, the rollers 32A,32B of Gilliland include grooves 120 (according to the Examiner's combination). If rollers 32A,32B include grooves 120, then a wire supported therebetween cannot have its centerline above outside surfaces of both drive rollers and be driven by the drive rollers. For at least this reason, Applicant/Appellant submits that claim 8 is in condition for allowance simply because this claim depends from claim 6.

E. Independent Claim 14 And Dependent Claims 15-17 Are In Condition For Allowance

1. The Examiner's Rejection Of Claim 14 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed

Claim 14 calls for first and second drive rollers to each include an outer surface extending circumferentially therearound, which has a first side wall and a second side wall extending radially thereinto that together define a groove. Claim 14 further calls for the first side wall to intersect the second side wall and to be oriented at an angle less than ninety degrees (90°) relative to the second side wall. As already stated, the Examiner rejected claim 14 over Gilliland in view of Applicant's Disclosure. In discussing claim 14 in the final Office Action, the Examiner appears to have completely ignored the limitations calling for the side walls to extend radially into outer surfaces of the drive rollers and to intersect one another. See *final Office Action* at pg. 3-4.

a. The Combination Advanced By The Examiner Fails To Show Or Fairly Suggest Each And Every Limitation Of Claim 14

In view of claim 14 calling for first and second drive rollers to each include an outer surface having first and second sidewalls extending radially thereinto that together define a groove with the first side wall intersecting the second side wall, Applicant/Appellant asserts that claim 14 is patentably distinct over the references of record. The Office Actions of record wholly fail to address this limitation. Moreover, the references applied against claim 14, namely Gilliland and Applicant's Disclosure, fail to

disclose opposed drive rollers each having a groove defined by a first radially extending side wall intersecting a second radially extending side wall. Accordingly, Applicant/Appellant submits that each and every limitation of claim 14 is not shown or fairly suggested by the references applied by the Examiner against claim 14.

b. Combination of Gilliland And Applicant's Disclosure Improper

Applicant respectfully asserts that combining Gilliland and Applicant's Disclosure, including Figure 5, is improper. In particular, motivation to combine these teachings is lacking as already discussed herein. The purported motivation provided by the Examiner fails because the combination would not function as claimed by the Examiner (i.e., the combination could not be used to advance wire). Moreover, because the combination could not be used to advance wire, one primary purpose of a wire feeding mechanism (the subject matter claimed in claim 14), Applicant asserts that the "references" teach away from one another. All reasons presented above supporting Applicant's/Appellant's assertion that the combination of Gilliland and Applicant's Disclosure is improper are relied upon in refuting the Examiner's rejection of claim 14.

For at least these reasons, Applicant/Appellant respectfully submits that the rejection of claim 14 must be reversed.

2. Dependent Claims 15-17 Should Be Allowed When Claim 14 Is Allowed

Provided the Examiner's rejection of claim 14 is overturned, Applicant/Appellant submits that claims 15-17 are in condition for allowance simply because these claims depend from claim 14.

F. Dependent Claims 18-20 Are In Condition For Allowance

1. Dependent Claims 18-20 Should Be Allowed Due To Their Dependency From Claim 14

Provided the Examiner's rejection of claim 14 is overturned, Applicant/Appellant submits that claims 18-20 are in condition for allowance simply because these claims depend from claim 14.

2. The Examiner's Rejection Of Dependent Claim 18 As Being Obvious Over Gilliland In View Of Applicant's Disclosure Must Be Reversed

Claim 18, dependent from independent claim 14, calls for a centerline of a continuous length of wire to be above outer surfaces of opposed drive rollers used to advance the wire. The Examiner asserts that "Gilliland discloses where the centerline of the wire 11 is above the outer surface of the drive roller 32A, 32B." Office Action at pg. 3 and pg. 4. The problem with the Examiner's position is that he fails to account for the modification he used to reject independent claim 14. When the Examiner uses Figure 5 from Applicant's Disclosure to reject claim 14, the rollers 32A,32B of Gilliland include grooves 120 (according to the Examiner's combination). If rollers 32A,32B include grooves 120, then a wire supported therebetween cannot have its centerline above outside surfaces of both drive rollers and be driven by the drive rollers. For at least this reason, Applicant/Appellant submits that claim 18 is in condition for allowance simply because this claim depends from claim 14.

3. Dependent Claims 19-20 Should Be Allowed When Claim 18 Is Allowed

Provided the Examiner's rejection of claim 18 is overturned, Applicant/Appellant submits that claims 19-20 are in condition for allowance simply because these claims depend from claim 18.

VIII. CONCLUSION

In view of the above, Appellant respectfully submits that claims 1-20 are not anticipated or rendered obvious by the applied art. More particularly, for the reasons set forth above and the more detailed discussion of the reasons for the patentability of each of the claims set forth in the responses of April 13, 2005 and June 16, 2005 Applicant/Appellant respectfully requests the Board of Appeals to reverse each rejection of the Examiner.

Respectfully submitted,

FAY, SHARPE, FAGAN
MINNICH & McKEE, LLP

Dated: Oct. 17, 2005


Robert V. Vickers, Reg. No. 18,504
Erik J. Overberger, Reg. No. 48,556
1100 Superior Ave., 7th Floor
Cleveland, Ohio 44114
(216) 861-5582

CLAIMS APPENDIX 37 C.F.R. § 41.37(c)(1)(viii)

1. A wire feeding mechanism for advancing a continuous length of wire along a pathway, comprising:

a housing having two roller supports each rotatable about a corresponding axis transverse to a wire pathway, said roller supports being on opposite sides of said pathway and being driveably engaged with each other;

a drive roller on each of said roller supports for rotation therewith, said drive roller including an outer surface extending circumferentially about said corresponding axis that defines a groove having an included angle between a pair of intersecting walls defining the groove that is about thirty degrees (30°) or greater and less than ninety degrees (90°), said drive roller on each of said roller supports compressively contacting a continuous length of wire between said roller supports such that said wire is advanced along said pathway in response to rotation of said drive rollers.

2. The wire feeding mechanism of claim 1 wherein said included angle is about thirty to about sixty degrees (30° - 60°).

3. The wire feeding mechanism of claim 2 wherein said included angle is about sixty degrees (60°).

4. The wire feeding mechanism of claim 1 wherein a centerline of said continuous length of wire is above said outer surface of said drive roller.

5. The wire feeding mechanism of claim 4 wherein said included angle is about thirty to about sixty degrees (30° - 60°).

6. A wire feeding mechanism for advancing a continuous length of wire along a pathway, comprising:

a housing having two roller supports each rotatable about a corresponding axis transverse to a wire pathway, said roller supports being on opposite sides of said pathway and being driveably engaged with each other;

a first drive roller concentrically disposed with one of said two roller supports for rotation therewith, said first drive roller including a first drive roller groove extending circumferentially therearound and having a first drive roller included angle of at least about thirty degrees (30°) and less than ninety degrees (90°);

a second drive roller concentrically disposed with the other of said two roller supports for rotation therewith, said second drive roller including a second drive roller groove extending circumferentially therearound and having a second drive roller included angle of at least about thirty degrees (30°) and less than ninety degrees (90°); and

said first and second drive rollers positioned relative to one another such that a continuous length of wire received in said circumferential grooves between said first and second drive rollers is advanced along said passageway in response to rotation of said first and second drive rollers.

7. The wire feeding mechanism of claim 6 wherein said included angles are each about thirty to about sixty degrees (30° - 60°).

8. The wire feeding mechanism of claim 6 wherein a centerline of said continuous length of wire is between a first drive roller outside surface and a second drive roller outside surface.

9. The wire feeding mechanism of claim 8 wherein said included angles are each about thirty to about sixty degrees (30° - 60°).

10. The wire feeding mechanism of claim 6 wherein at least one of said first and second drive rollers compressively engages said continuous length of wire to advance said wire along said passageway in response to rotation of said at least one of said first and second drive rollers.

11. The wire feeding mechanism of claim 6 further including:
a second set of roller supports each rotatable about a corresponding axis transverse to a wire pathway, said second set of roller supports spaced apart from said

two roller supports along said pathway, each of said second set of roller supports being on opposite sides of said pathway and being driveably engaged with each other;

a third drive roller concentrically disposed with one of said second set of roller supports for rotation therewith, said third drive roller including a third drive roller groove extending circumferentially therearound and having a third drive roller included angle of less than ninety degrees (90°);

a fourth drive roller concentrically disposed with the other of said second set of roller supports for rotation therewith, said fourth drive roller including a fourth drive roller groove extending circumferentially therearound and having a fourth drive roller included angle of less than ninety degrees (90°), said fourth drive roller positioned opposite said third drive roller so that said wire is compressively received between said third and fourth drive rollers for advancement along said passageway in response to rotation of said third and fourth drive rollers.

12. The wire feeding mechanism of claim 6 wherein said first drive roller includes a second first drive roller groove extending circumferentially therearound and spaced from said first drive roller groove for use when said first drive roller groove is worn.

13. The wire feeding mechanism of claim 6 wherein at least one of said first and second drive rollers is radially adjustably positionable relative to said pathway.

14. A wire feeding mechanism for advancing a continuous length of wire along a pathway, comprising:

a first drive roller rotatably supported in a housing for engaging and advancing a continuous length of wire along a pathway;

a second drive roller rotatably supported in said housing on an opposite side of said pathway from said first drive roller for engaging and advancing said wire along said pathway; and

said first and second drive rollers each including an outer surface extending circumferentially thereabout, said outer surface having a first side wall and a second side wall extending radially thereinto that together define a groove, said first side wall

intersecting said second wall and oriented at an angle of less than ninety degrees (90°) relative to said second side wall.

15. The wire feeding mechanism of claim 14 wherein said first and second drive rollers positioned to compressively engage said wire to advance said wire along said pathway in response to rotation of said first and second drive rollers.

16. The wire feeding mechanism of claim 14 further including:
a housing having two roller supports each rotatable about a corresponding axis transverse to a wire pathway, said first and second drive rollers mounted on said roller supports for rotation therewith and said roller supports being driveably engaged with one another.

17. The wire feeding mechanism of claim 14 wherein the first side wall is oriented at an angle of between about thirty and about sixty degrees (30° - 60°).

18. The wire feeding mechanism of claim 14 wherein a centerline of said continuous length of wire is above said outer surface of both of said drive rollers.

19. The wire feeding mechanism of claim 18 wherein said first side wall is oriented at an angle of between about thirty and about sixty degrees (30° - 60°).

20. The wire feeding mechanism of claim 19 wherein said first side wall is oriented at an angle of about sixty degrees (60°).